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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/921,630	08/03/2001	Nobuyasu Morishita	MAT-5310US1	8129
7590 02/25/2004			EXAMINER	
Ratner & Prestia P.O. Box 980 Valley Forge, PA 19482			CREPEAU, JONATHAN	
			ART UNIT	PAPER NUMBER
			1746	

DATE MAILED: 02/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/921,630

Applicant(s)

MORISHITA ET AL.

Examiner

Jonathan S. Crepeau

Art Unit

1746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 January 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 4, 6 and 7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 4, 6 and 7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. This Office action addresses claims 4, 6, and 7. These claims are newly rejected under 35 USC §103, as necessitated by amendment. Accordingly, this action is made final. It is noted that the specification and declaration remain objected to for the reasons set forth in the previous Office action (i.e., an improper priority claim).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 4, 6, and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 644604.

Regarding claim 4, the reference teaches a plurality of battery modules, each battery module comprised of a plurality of cells (see Example 9; Fig. 2A). The modules are arranged in a 4 x 4 square shaped configuration (see Example 9). The cells of one module are held together independently of the cells of another module by end plates (14) and bands (15) (see Figs. 2A and 2B). The cells in each module have convex portions (10) which coincide to create spaces between the cells. The modules are arranged to receive cooling medium in parallel and the

Art Unit: 1746

cooling medium flows in a vertical direction toward the top (terminal side) of the cells (see Example 9). Regarding claim 7, the modules are held to each other by a carrier (see Example 9). Regarding claim 6, the convex portions may also be disposed horizontally with respect to the terminals (see claim 6 of the reference).

The reference does not expressly teach that a first battery module is disposed “on its side,” or that a second module is stacked on its side on the first module, as recited in claim 4.

However, the invention as a whole would have been obvious to one of ordinary skill in the art at the time the invention was made because the reference fairly suggests the claimed stacking orientation of the modules. As noted above, the reference teaches that the modules are arranged in the form of a 4 x 4 square. This disclosure reasonably indicates that the modules are arranged in a horizontal two-dimensional layout with the terminals of each module facing upward. However, depending on the particular application or end use of the module system, it would have been obvious to rotate the entire 4 x 4 module configuration on its side, thereby resulting in the claimed configuration. Insofar as the disclosed arrangement of battery modules is an “arrangement of parts,” the rearrangement of such parts has generally been held to be *prima facie* obvious. See *In re Japikse*, 181 F.2d 1019, 86 USPQ 70 (CCPA 1950); MPEP §2144.04(VI)(C). In this case, the rotation of the modules to a sideways position would have a negligible effect on battery performance since all batteries would remain physically and electrically connected in the same manner as disclosed in the reference. Accordingly, the claims, as amended, are still not considered to patentably distinguish over the EP ‘604 reference.

Art Unit: 1746

Conclusion

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, THIS ACTION IS MADE FINAL. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan Crepeau whose telephone number is (571) 272-1299. The examiner can normally be reached Monday-Friday from 9:30 AM - 6:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski, can be reached at (571) 272-1302. The phone number for the organization where this application or proceeding is assigned is (571) 272-1700. Documents may be faxed to the central fax server at (703) 872-9306.

Jonathan Crepeau
Patent Examiner
Art Unit 1746
February 13, 2004

Bruce Bell
BRUCE F. BELL
PRIMARY EXAMINER
GROUP 1746